

10/551025

JCO9 Rec'd PCT/PTO 29 SEP 2009

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Atty. Docket

GIRALDO et al.

GB 030033

Serial No.

Group Art Unit

Filed: CONCURRENTLY

Ex.

DISPLAY DEVICE HAVING A SPARKLING EFFECT AND METHOD FOR DRIVING THE
SAME

Commissioner for Patents
Alexandria, VA 22313-1450

PRELIMINARY AMENDMENT

Sir:

Prior to calculation of the filing fee and examination, please
amend the above-identified application as follows:

Please Enter

Wk

4/2/08

IN THE CLAIMS

Please amend the claims as follows:

1. (original) Display device (6;6') comprising:

- a display (2) having a plurality of display pixels (3;3')

with light emitting elements (LED) and at least a first drive element (T1) and a second drive element (T2) for driving said light emitting elements (LED) in accordance with an analogue data signal, representing at least one frame in a range from low to high overall light emission states for said display (2), and

- a display controller (10) having a data input (9) for said analogue data signal, a sensing unit (16) adapted to evaluate the overall light emission state of said frame and an output (13) for generating at least one sparkling signal for one or more display pixels (3;3') having a high light emission state (18) exceeding a sensed low overall light emission state of said frame,

wherein said display controller (10) is arranged to individually control said first drive element (T1) and said second drive element (T2) by said sparkling signal such that said one or more display pixels (3;3') having said high light emission state are driven by at least one of said drive elements (T1,T2) in a sparkling light emission state (18';18'') exceeding said high light emission state (18).

2. (original) Display device (6') according to claim 1, wherein said display pixels (3') comprise selection means (S1,S2) arranged to receive said sparkling signal and said display controller (10) is arranged to control said drive elements (T1,T2) via said selection means (S1,S2) by said sparkling signal in order to select both said first drive element (T1) and said second drive element (T2) to obtain said sparkling light emission state (18").

3. (original) Display device (6) according to claim 1, wherein said first drive element (T1) is connected to a first power line (15) for driving said light emitting elements (LED) in a first drive range (17), providing a low light emission state, and said second drive element (T2) is connected to a second power line (15') for driving said light emitting element (LED) in a second drive range (18), providing said high light emission state.

4. (original) Display device (6) according to claim 3, wherein said display pixels (3) comprise selection means (S1,S2) arranged for receiving said sparkling signal and selecting said second drive element (T2) and said display controller (10) is arranged to increase the power of said second power line (15') to

modify said second drive range (18), providing said high light emission state, to said sparkling light emission state (18').

5. (original) Display device (6) according to claim 1, wherein said first drive element (T1) is adapted to drive said light emitting element (LED) in a first drive range (17) and said second drive element (T2) is adapted to drive said light emitting elements (LED) in a second drive range (18) in accordance with said analogue data signal and said display controller (10) is adapted to redistribute said analogue data signal over said first drive range (17;17a) and said second drive range (18';18a') for said one or more display pixels (3) having a high light emission state when said sparkling signal is output.

6. (original) Display device (6') according to claim 1, wherein said display controller (10) is adapted to transfer a part of said analogue data signal intended for said second drive element (T2) to said first drive element (T1) when outputting said sparkling signal and said first drive element (T1) is adapted to process said part of said analogue data signal.

7. (original) Display device (6;6') according to claim 1, wherein said drive elements (T1,T2) comprise transistors having

different transistor characteristics, such as transistor channel dimensions ($W_1; W_2$) and/or threshold voltages (V_T) and/or carrier mobilities (μ).

8. (original) Display device (6;6') according to claim 1, wherein said light emitting elements (LED) are light emitting diodes.

9. (currently amended) Electric device (1) comprising a display device (6;6') according to ~~any one of the claims 1-8~~claim 1.

10. (original) Method for driving a display device (6;6') having a display controller (10) and a display (2) with a plurality of display pixels (3;3') with light emitting elements (LED) and at least a first drive element (T1) and a second drive element (T2) for driving said light emitting elements (LED) in accordance with an analogue data signal, representing at least one frame in a range from low to high overall light emission states for said display (2), comprising the steps of:

sensing said analogue data signal to evaluate the overall light emission state of said frame;

generating at least one sparkling signal for one or more display pixels (3;3') having a high light emission state (18) exceeding a sensed low overall light emission state of said frame, such that said first drive element (T1) and said second drive element (T2) are individually controlled by said sparkling signal to drive said one or more display pixels (3;3') having said high light emission state (18) by at least one of said drive elements (T1,T2) in a sparkling light emission state (18';18'') exceeding said high light emission state (18).

11. (original) Computer program for driving a display device (6;6'), wherein said computer program at least comprises code-portions for executing the method of claim 10.